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ABSTRACT

This study was conducted to help teachers decide what factors govern high school students' knowledge of geography. Information was gathered about the students' background, including: gender, exposure to a course of study in world history, overall grade point average, travel experience outside the United States, and habits of reading newspapers and watching world news on television. A second set of data were gathered that concerned the rationale for the choice of countries for the test, including countries appearing in the news frequently, countries involved with the United States due to military action, countries geographically located close to the United States, and countries chosen at random. The data showed that there was a negative correlation between knowledge of geography and exposure to world history, and that recent news exposure did not help students recognize countries. The study concluded that prior knowledge might be more responsible for high performance. (KM)

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# Action Research: Factors Influencing Recognition of Geographical Locations on A world Map

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The purpose of this study is to help teachers decide what factors are involved in the high school student's knowledge of geography. Factors which were examined fell into two groups. The first group involved information about the high school student: gender, exposure to a course of study in world history, overall grade point average, travel experience outside the United States, habit of reading the front page news, and habit of watching t.v. world news. The second group of factors involved the rationale for the choice of test items. Some countries were chosen for their newsworthiness: Saudi Arabia, Iran, and Panama have all recently been involved with the United States with respect to military action. The Soviet Union, China, Japan, and South Africa are regularly the subjects of news stories. Two countries, Mexico, and Cuba, were chosen because of their proximity to the United States. Three were chosen because of their size and isolation: Greenland, Australia, and Antarctica. Two were chosen because of their unique shape: Chile and India. The rest were chosen at random.

The research questions are as follows:

(1) Does there exist a positive correlation between any of these factors and the ability to readily locate countries (or continents) on a map: Gender; Exposure to a course in world history; High overall grade point average; Travel experience in other countries; Reading front page news regularly; or Regular viewing of world news on television?

(2) Does there exist a positive correlation between the ability to to locate countries (continents) on a world map and any of the following: News exposure of the country; Proximity of the country to the United States; Global isolation of a large country; and Uniqueness of shape of a country?

Eighty seven New Hanover High School students were given world maps and asked to fill in the names of 20 countries or continents which were numbered. They were told not to guess, but to leave blank spaces when they were not sure of the answers. They were given as much time as they needed to complete the test and were not allowed to collaborate. Results of the test are shown on the table below:

| Number Missed | Total Students | Male | Female | World History Course | T.V. News 3+ Times a Week | Front Page News 3+ Times a Week | 0-2.9 G.P.A. | 3.0+ G.P.A. | Travel Experience Outside U.S. |
|---|---|---|---|---|---|---|---|---|---|
| 0-5 | 33 | .57 | .36 | .60 | .66 | .51 | 21 | .78 | .25 |
| 6-10 | 21 | .52 | .47 | .52 | .57 | .52 | .47 | .52 | .28 |
| 11-15 | 19 | .15 | .84 | .84 | .57 | .42 | .63 | .36 | .31 |
| 16-20 | 14 | .28 | .71 | .64 | .42 | .50 | .71 | .28 | .07 |

If the numbers of incorrect answers are divided into quarters, as above, the only positive correlations down the line exisit between fewer incorrect answers and male gender; fewer incorrect answers and over all grade point average above a 3.0; and fewer incorrect answers and t.v. news viewed three or more times weekly. However, if the numbers of incorrect responses are divided into halves and the two are compared, then there also exists a positive correlation between fewer wrong answers and reading the news and travel outside the U.S. The only negative correlation which is consistent throughout is the fewer incorrect answers and the exposure to a world history course.

The second half of this study focuses on the countries which were most and least frequently missed and the rationale for inclusion of certain countries in the study. The intention was to determine if news exposure, isolation and size, proximity to the U.S., or unique shape influenced frequency of recognition. Following is a list of countries in order of frequency they were found either blank or a wrong answer was given:

| Country | Missed Frequency | Rationale for Choosing |
|---|---|---|
| Australia | 13 | Isolation / Size |
| Mexico | 16 | Proximity |
| USSR | 19 | News |
| China | 23 | News |
| Antarctica | 29 | Isolation / Size |
| Chile | 34 | Shape |
| Cuba | 34 | Proximity |
| Brazil | 34 | Random |
| Japan | 35 | News |
| Greenland | 36 | Isolation / Size |

| untry | Missed Frequency | Rationale for Choosing |
|---|---|---|
| South Africa | 37 | News |
| Spain | 38 | Random |
| France | 39 | Random |
| Saudi Arabia | 42 | News |
| India | 45 | Shape |
| Argentina | 47 | Random |
| Panama | 48 | News |
| Ireland | 54 | Random |
| Iran | 63 | News |
| Algeria | 80 | Random |

Does exposure in the news increase frequency of recognition? This question targeted Iran, Saudi Arabia, Panama, U.S.S.R., and China. The fact that the Middle Eastern countries which have received the most news exposure were also among the most frequently missed (.65 of the other countries were named correctly more often) may lead to the conclusion that other factors such as size enabled recognition rather than news exposure.

Does proximtiy to the United States increase frequency of recognition. Since both Mexico and Cuba ranked high on the list, a positive relationship can be concluded.

Does size and isolation increase recognition? The greatest correlation was found to exist here with Antarctica, Australia, and Greenland being recognized more consistently.

Two countries which have a distinctive shape are Chile and India - one resembles a snake and the other, a top or a diamond. Did this factor make a difference? The finding was negative.

The most surprising finding of this study is the apparent inverse correlation here between knowledge of geography and exposure to world history. This indicates that indeed students learn geography elsewhere. Due to the fact that newsmaking countries were not frequently recognized indicates that other factors play a part. The fact that proximity increased frequency shows a high level of awareness of immediate surroundings into which travel may also come into play. The greatest frequency of recognition occured where fairly large countries were somewhat isolated. These countries, (Greenland, Australia, and Antarctica) which are seldom in the news may have been studied and made an impression in earlier grades.

The second most surprising finding of the study is the fact that Iran was the second most frequently missed country in view of recent news exposure. No doubt, classroom teachers have recently included a study of the Desert Sand conflict in a wide variety of disciplines. Place location is implicit in an effort by teachers to increase knowledge of these serious world events. In addition, news and weather presentations throughout all media consistently include maps as part of the "story". This indicates that more is needed to increase familiarity with a country than a map of a section of the world under consideration. The total picture is cruçial to a full understanding.

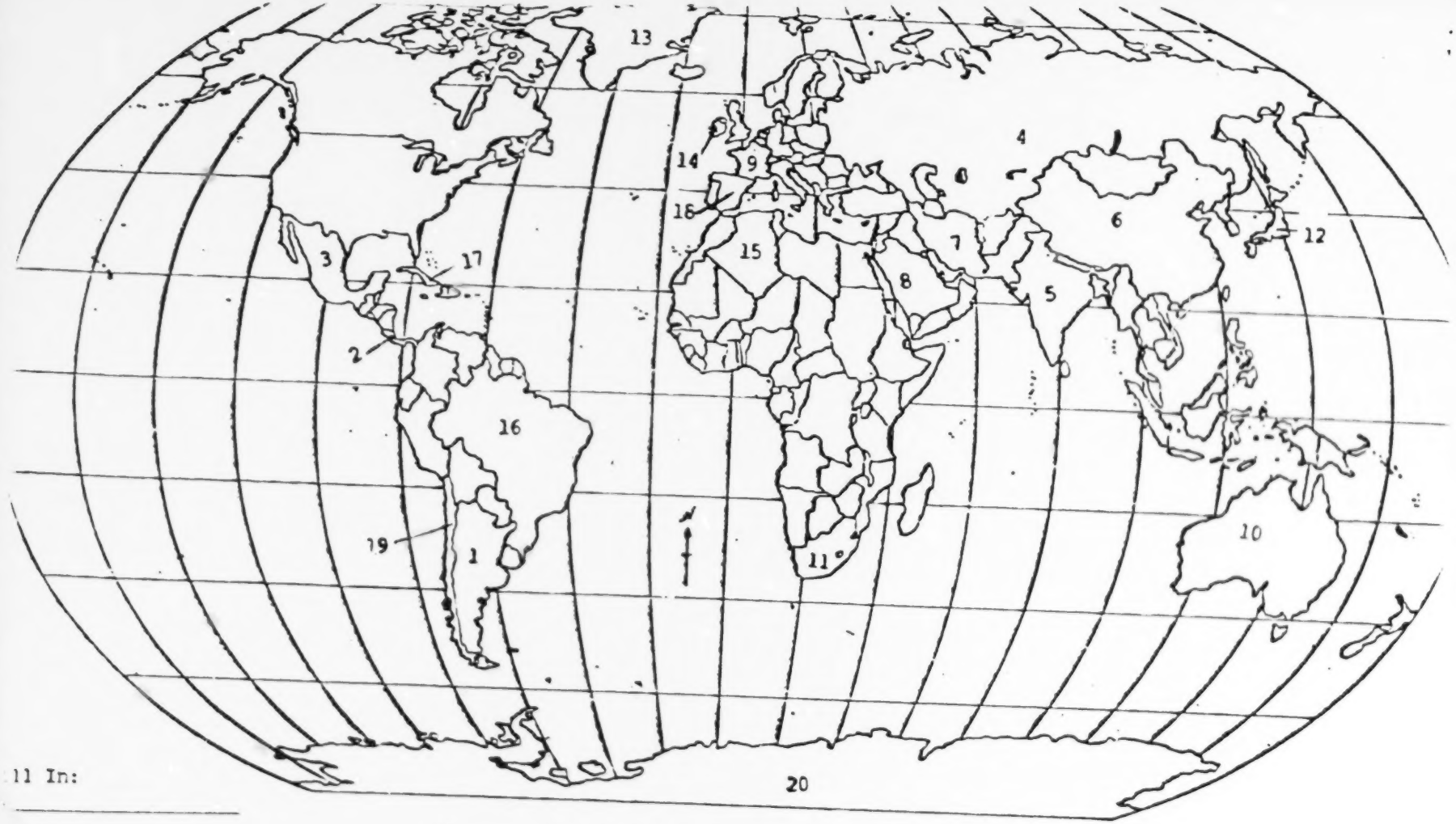
A third surprising finding of the study is the number of grossly incorrect answers in view of the fact that the participants were told and reminded throughout the test not to guess, but to

fill in only what they knew. These responses include errors such as naming bodies of water, cities, American states, and continents instead of countries. Also there were cases where notion of size was profoundly mistaken such as confusion of Australia with Japan.

In summary, this study found that of 87 high school students administered an elementary map skills test, that .62 were able to correctly name 10 or more countries. Performance ability was positively correlated with male gender,** t.v. news watching, reading world news, high grade point average, and outside travel. A negative correlation was found between high performance and exposure to a world history course. Also countries which were missed less frequently with two exceptions were not countries which were considered to have high profiles with respect to recent news events. It is suggested that world maps be used frequently when discussing world events rather than regional maps in order to gain perspective.

Conclusion: Due to the negative correlation between performance and world history and the high frequency of news making countries being missed, the conclusion was suggested that prior learning might be more responsible for high performance. Teachers of world history might be advised to give students a diagnostic test at the beginning of the year, teach to the significant deficiencies, and demand a grade of B or better, allowing the students to repeat until this level of mastery is reached.

**The correlation of high performance and male gender was not dealt with here.

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Male_____ Female_____

Have had course in World History _____

Have traveled outside the US _____times

Grade point average_____

Read newspaper front page _ _____times a week

Watch national and world news _____times a week